

Hookworm Infection

Disease Fact Sheet Series

What is hookworm infection?

Hookworms are small parasitic worms (adult stage is approximately 1 centimeter long) which can infect the small intestines. There are two major species of hookworms for which humans are the usual host, and three species that primarily infect dogs and cats that can also cause infection in humans.

Who gets hookworm infection?

Hookworm is estimated to affect one-fourth of the world's population. It is widely found in tropical and subtropical countries such as Asia (particularly Southeast Asia), East Africa, the South Pacific and South America. It is also found occasionally in the southeastern United States. Hookworm infection occurs where sanitary disposal of human waste is not available and where the temperature and other environmental conditions favor the development of infective larvae.

How is hookworm spread?

Hookworm is not spread directly from one person to another. It is transmitted when the microscopic hookworm eggs in human or animal feces (stool) are deposited on the ground, hatch and develop into tiny larvae. People become infected when the larvae penetrate the skin, usually of the foot. The larvae eventually migrate to the small intestine where they attach to the intestinal wall, mature into adult hookworms and produce eggs in 6-7 weeks. Without treatment the infection may persist for several years.

What are the symptoms of hookworm?

When the larvae penetrate the skin, they produce a characteristic skin rash termed "ground itch". Abdominal pain, diarrhea, and weight loss may occur when the worms attach to the intestinal wall. If the infection is light, few or no symptoms may occur. If the infection is heavy, iron deficiency and anemia may develop. Prolonged heavy infections can retard mental and physical development.

How soon after exposure do symptoms appear?

Although "ground itch" may occur immediately, other symptoms may develop from a few weeks to many months after exposure, depending on the intensity of the infection and the iron intake of the person infected.

(Over)

How is hookworm diagnosed?

Infection is confirmed in a medical laboratory by finding the microscopic hookworm eggs in the feces (stool).

What is the treatment for hookworm infection?

Doctors treat hookworm infections with an antiparasitic drug. The currently available drugs result in a very high rate of cure. If the infected person is also anemic, this should be corrected with iron therapy. It is recommended that a stool specimen be submitted for testing two weeks after therapy has been completed. If there is still evidence of infection, retreatment is recommended.

How can hookworm be prevented?

Hookworm can be prevented by improving general sanitary conditions, especially installing sanitary disposal systems for feces. Nightsoil (soil containing human feces) and sewage effluent are dangerous to use as fertilizer. Shoes should be worn when walking in areas where hookworm disease is common. Persons immigrating from endemic to non-endemic areas, such as refugees from Southeast Asia, should be examined and treated if infected.